to Edward Burnett Tylor in honour of his 75th Birthday, October 2, 1907": "The extent of his reading, his critical acumen, his accuracy, his power of exposition, his open mind, and his scientific caution make this book no passing essay, but a possession for ever."

Ten years later Tylor published a most excellent little book, "Anthropology: an Introduction to the Study of Man and Civilization" (1881), which still remains a valuable and suggestive guide for those who desire to know the significance of what Max Müller termed "Mr. Tylor's science."

On looking through the compendious bibliography of Tylor from 1861 to 1907 compiled by Miss Freire-Marreco for the above-mentioned Essays, it is obvious that, apart from his four books, his activity largely manifested itself in lectures, reviews, and addresses. His papers, even when descriptive, were always marked by a breadth of view and an endeavour to drive home the lessons to be garnered from the facts. The most important of these papers is that "On a Method of Investigating the Development of Institutions, applied to Laws of Marriage and Descent," in which it was his "aim to show that the development of institutions may be investigated on a basis of tabulation and classification." In order to indicate the wide range of his studies, the following are some of the subjects of his papers: Games, Australian marriage laws, the origin of the plough and wheel-carriage, the Asiatic relations of Polynesian culture, the winged figures of the Assyrian and other ancient monuments, charms and amulets, the Tasmanians as representatives of Palæolithic man, and totemism. Indeed, there were few aspects of anthropology which he had not investigated, and he enriched all those with which he dealt.

Although Tylor illustrated his theses with a wealth of references, he never permitted himself to be swamped by them. He will always be regarded as the first and foremost exponent of the comparative method in this country, and though, as was natural for a contemporary of Darwin and Huxley, he was imbued with the principle of development, yet he was fully alive to the borrowing of culture and to cultural drifts; thus, ever since 1874 he repeatedly drew attention to the direct cultural influence of Asia on the higher civilisations of the New World and the spread thence of certain elements of that culture among more barbarous tribes. Tylor was always interested in method, and it was mainly by his efforts in this direction that ethnology can now claim to be a science.

A. C. HADDON.

CAPT. F. C. SELOUS.

THE late Capt. Frederick Courteney Selous, whose death in action against the remaining German forces in East Africa has just come as a painful shock to his many friends in the two hemispheres, was born in London on the last day of 1851. His surname—pronounced in the French manner—indicated his French ancestry on the father's side, but his main composition was English and Scottish, and his appearance almost Scandinavian in his blondness and his Nordic violet eyes—perhaps the most striking feature in a very charming face. As a young man he was exceedingly good-looking, and always reminded me—after I had been to South Africa—of a not uncommon type of Boer (which, indeed, is a very common type in Holland), similarly blond and with the like violet-grey eyes. I first met him in the early 'eighties at the house of his near relatives, the Garrods, of Harley Street. The great comparative anatomist, Alfred Garrod, was his cousin, and similarly of Huguenot-French origin.

Selous was educated first at Rugby and afterwards in French Switzerland and in Rhenish Germany, so that he entered on his African explorations with a well-filled mind and a trained power of observation. I rather fancy his decided bent for natural history and the pursuit of big game must have arisen from his Garrod connections and the consequent deep interest he took in the Zoological Gardens (Prof. Garrod was prosector there).

He was an African pioneer of the very best type. Always a total abstainer, there was never anything rowdy about him, yet he won the respect and frank liking of the roughest types of men of all races. He was greatly esteemed in the United States. Only three days before the announcement of his death I received a note from the secretary of the New York Zoological Society, recounting a talk with Prof. H. F. Osborn and Colonel Roosevelt about the war, winding up with the question: "*Have* you any news about Selous? We are all so anxious about him."

Selous was not a systematist in zoology, but he was a close and accurate observer of the life-habits of birds and beasts, and in his branch of natural history he contributed much valuable lore to science. If all his contributions were removed from the galleries and drawers of the British Museum, our examples of the African fauna—especially its spectacular fauna—would indeed be poor. Moreover, he added very greatly to our knowledge of birds' eggs, especially the eggs and nests of Palæarctic (and Mediterranean) birds.

His loss will be a source of grief to many, not only here and in the United States, but also in Africa. I should think he was one of those few notable and active men who never made an enemy, not even when he took a strong, almost vehement, line in the matter of the protection of birds from the ravages of the plumage trade, on which subject he made terse and most effective speeches.

H. H. JOHNSTON.

NOTES.

THE question of closer co-ordination between scientific research and practical design in aeronautics has been mentioned more than once in these columns, and it now appears that such co-ordination will be one of the good results following the reorganisation of the Air Board. The inclusion of two representatives of the Ministry of Munitions and of a technical director should ensure the full use of the available scientific data in the design of machines, especially as the name of Dr. T. E. Stanton has been mentioned in connection with the latter appointment. As is well known, Dr. Stanton has been superintendent of the engineering and aeronautical departments of the National Physical Laboratory for many years, and is therefore in possession of all the necessary scientific knowledge in both the aerodynamical and purely engineering branches of the subject. The proposed housing of the various departments of the Board under one roof, and consequent free exchange of ideas between technical experts of both Services, should do much to advance the scientific design of machines. Another excellent feature of the reorganisation is the possibility of standardising component parts of machines and engines for both Services, and thereby improving the rapidity of construction. If we are to maintain our air supremacy, it is necessary that we should have an ample supply of machines of existing proved types, as well as that we should proceed to new designs, and the centralisation of supply and design should assure both these necessities in the future.

IN a series of recommendations made by the Federation of British Industries for the development of Government service for the promotion of British trade in foreign countries, it is suggested that foreign trade should be under a single department operating under Foreign Affairs. The proposed department would undertake the promotion and protection of British trade in foreign countries and the collection and distribution of information relating thereto, support British efforts to secure contracts abroad, and, when possible, make it a condition that goods purchased by loans to foreign countries should be obtained mainly from British sources. Similar functions in regard to Home and Colonial trade should be discharged by the Board of Trade, a Ministry of Commerce, or other appropriate department. With respect to the Diplomatic Service, it is suggested that the staff should be increased with the view of enabling officials to pay more attention to commercial affairs, and that an officer of high rank designated Commercial Counsellor with appropriate assistance should be added. Suggestions are also made for the improved remuneration and training of the members of the Consular Service, promotion to be by merit under the supervision of a Promotions Board. Candidates for the service should be required to pass a general course in economics and commercial methods, and should be conversant with two or more foreign languages. Facilities for such training should be provided at the universities. Officers should also be granted facilities to visit the leading industrial centres at frequent intervals. A staff of experts is also needed to procure detailed information on particular trades, industries, and markets. Finally, the urgency of this reform is pointed out. Steps should be taken immediately in order to be prepared for conditions after the cessation of war.

"MICROBES and the War," with comments on the national neglect of natural science, is the title of a pamphlet by Prof. Ernest Glynn, of the University of Liverpool. The author first describes, in popular language, the various microbial diseases which attack armies in the field, and comments on the measures that have been taken to combat them, which are the outcome of scientific research as to their nature and prevention. Notable instances of these are typhoid fever and anti-typhoid inoculation, cholera and anti-cholera inoculation, Mediterranean fever and its spread by goats' milk, and, among animals, glanders and its recognition by the mallein test. By an appreciation of the vast importance of bacteriological science in the present war, our armies "have won great, though silent and bloodless, victories." Prof. Glynn then proceeds to discuss the general neglect of science by the nation and its disastrous consequences in the present war—our dependence upon the foreigner for dyes, chemicals and synthetic drugs, glassware and optical glass, for example. A Cabinet Minister excused the importation of fat into Germany by the statement that it had only *recently* been discovered that glycerin could be obtained from lard; Woolwich Arsenal advertised for university-trained research chemists at wages of 2*l.* 0*s.* 6*d.* per week! Prof. Glynn ascribes the national neglect of science as being largely due to the dominance of vested interests in classics. At Eton, of eighty assistant-masters but five teach science, and the same disproportion holds good for the majority of public schools. The argument is supported by quotations from numerous sources that have appeared during the last two years. The pamphlet is issued by Messrs. Tinling and Co. at the modest price of 3*d.*, and should be widely circulated.

THE death is announced, at eighty-nine years of age, of M. J. B. A. Chauveau, member of the section of rural economy of the Paris Academy of Sciences.

PROF. W. KOLLE, of the Institute of Hygiene and Bacteriology at Berne, has been appointed successor to Prof. Paul Ehrlich in the directorship of the Frankfort Institute for Experimental Therapy.

THE Order of the Nile, Second Class, has been conferred by the Sultan of Egypt upon Mr. S. H. Wells, Director-General of the Department of Technical, Industrial, and Commercial Education in Egypt, and formerly principal of the Battersea Polytechnic.

MR. F. A. STOCKDALE, Director of Agriculture, Mauritius, has been appointed by the Secretary of State for the Colonies Director of Agriculture, Ceylon, and Dr. H. A. Tempany, Government Chemist and Superintendent of Agriculture for the Leeward Islands, has been appointed to succeed Mr. F. A. Stockdale as Director of Agriculture, Mauritius.

CLOSE upon the news of the depredations of the blister rust in the American white-pine forests comes a report from the Department of Agriculture directing attention to the fact that the poplars of the United States are seriously threatened by an outbreak of the European poplar-canker. The States affected include New Hampshire, Massachusetts, Rhode Island, Connecticut, New Jersey, Pennsylvania, Delaware, Maryland, Ohio, and Nebraska. The disease attacks the twigs, limbs, and trunks of the black and Lombardy poplars, and of the Carolina poplars or cottonwoods.

DR. FRANK M. CHAPMAN, curator of ornithology at the American Museum of Natural History, New York, has recently returned from a journey taken largely in order to establish friendly relations with the museums of South America. He has arranged with the directors of several of these museums for regular exchanges of specimens. Many of the directors have also consented to act as local representatives of the New York institution, and to give assistance in the work of exploration. Dr. Ribero, for instance, at Rio de Janeiro, helped Dr. Chapman's party to find favourable spots for collecting in the mountains near that city. Dr. Chapman's report on Colombia is already in type, and reports are in preparation respecting the exploration of Ecuador, Peru, and Bolivia. It is hoped that there may eventually be completed—though not, perhaps, for several generations—a biological survey of the whole of South America, for which the American Museum of Natural History, with the co-operation of the local museums, will be responsible.

At the annual general meeting of the Faraday Society held on December 18, 1916, the following officers and council were elected:—*President,* Sir Robert Hadfield; *Vice-Presidents,* Prof. K. Birkeland, W. R. Bousfield, Prof. F. G. Donnan, Dr. Eugene Haanel, Prof. A. K. Huntington, and Dr. T. Martin Lowry; *Treasurer,* Dr. F. Mollwo Perkin; *Council,* W. R. Cooper, Dr. C. H. Desch, Dr. J. A. Harker, Emil Hatschek, Cosmo Johns, Prof. A. W. Porter, E. H. Rayner, A. Gordon Salamon, Dr. George Senter, and Cav. Magg. E. Stassano. A general discussion, to be opened by Sir George Beilby, F.R.S., will shortly be held on "The Training and Work of the Chemical Engineer." Later in the session general discussions will probably be arranged to deal with "Osmotic Pressure" and "The Setting of Cements and Plasters."

Dr. J. Walter Tewkes has issued a pamphlet reporting the progress made in the excavation and repair of the Sun Temple at Mesa Verde National Park. The monument was discovered by Dr. Tewkes in 1909, and since then work has steadily gone on in order to excavate and repair this interesting building. The pamphlet issued by Dr. Tewkes contains a full account of the building, with a ground plan, measurements, and photographs, which make it now possible to understand the character and purpose of this remarkable structure.

Under the title, "Some Forest Insects in Aberdeenshire," Mr. Walter Ritchie, in the *Scottish Naturalist* for December, cites a remarkable case of a beetle which, in different areas of its range, selects different food-plants, though there is no apparent need for this change in diet. The species in question is *Cryptorhynchus Lapathi,* which, in Central Europe, is a destructive enemy of the alder, but on the Dee, near Aboyne, it feeds on the willow. Though alder trees of various ages were growing in abundance among the willows not a single alder was attacked.

"The Evolution of Provincial Museums and the Obstacles They Have to Surmount" formed the subject of an admirable address by Mr. F. Woolnough at the Ipswich Conference of the Museums Association of 1916. He complains much, in the *Museum Journal* for December, wherein this address is printed, of the lack of interest taken by the State in the work of museums, hence the want of funds and the restricted usefulness of such institutions. Every museum, he contends, should be provided with a well-equipped lecture-room, wherein the various aspects of this or that section of the collections can be enlarged upon before or after a visit to the actual specimens in the galleries. This provision is not likely to be made in the immediate future, having regard to our depleted exchequer, but nevertheless it is sadly needed.

We note with regret that the Bill for the introduction of protective measures designed to save some of the more interesting birds of Malta from extermination has been shelved, at least temporarily, as the result of an opposition which depended for success on ability to distort facts, in the supposed interests of local sportsmen and those who gain an easy living by exploiting the bird-life of the island. From the report of the debate in the *Daily Malta Chronicle,* which has been sent us, we learn that the Lieutenant-Governor and the Crown Advocate paid a just tribute to the efforts of Dr. Giuseppe Despott to place this Bill upon the Statute-book. Though the Crown Advocate, in the course of an able and learned speech, showed that the leader of the Opposition was himself but recently urging the very measures he now so strongly opposed, and though he directed a running fire of scathing criticism against the manifold absurdities of the arguments advanced, the Bill was suspended for six months in order that further evidence might be obtained. In the interests of the islanders themselves and of economic ornithology beyond the sphere of operations of this Bill, it is to be hoped that it will presently find a place on the Statute-book.

With the November number of the *Quarterly Journal of Microscopical Science* (vol. lxii., part 1) is issued an Index to vols. xxix.–lxi. (inclusive). The preface is signed by Mrs. H. L. M. Pixell-Goodrich, who is presumably responsible for its compilation on the plan adopted by Dr. G. H. Fowler for the index to vols. i.–xxviii. It is an index of both authors and subjects, and will be an invaluable aid to zoologists, who have so frequently to consult this important periodical. Incidentally, also, it constitutes a very interesting record of contributions made, chiefly by British zoologists, to what we may perhaps be allowed to term the more academic branches of zoological science during the past twenty-eight years, a record with which the editor of the journal, Sir E. Ray Lankester, has every reason to be satisfied.

The caterpillars of that destructive insect, the large larch saw-fly, *Nematus erichsonii,* have been found, and for the first time, in Aberdeenshire. They were met with in considerable numbers during the months of August and September by Mr. Walter Ritchie, who gives a brief account of his discovery in the *Scottish Naturalist* for December, 1916. He found that the area over which these caterpillars were dispersed measured about eight square miles, and this being so, it is well that the discovery has been made now, in order that immediate steps may be taken to check or suppress its extension. The damage, he remarks, caused by this species in England led to its being placed among the insects scheduled under the Destructive Insect Pests Order. By this Order the presence of the insect in any plantation must be reported at once to the Board of Agriculture.

A further important contribution to the science of animal nutrition in its application to farm animals is furnished by Armsby, Fries, and Braman in their determinations of the net energy values for cattle of red clover hay and maize meal, which are recorded in vol. vii., No. 9, of the *Journal of Agricultural Research.* Results in close agreement with previous determinations were obtained, the general average indicating a net energy value per kilogram of dry matter consumed of 981 Cal. in the case of clover hay, and 1913 Cal. for maize, the total metabolisable energy being 3522 Cal. and 3755 Cal. respectively.

For the guidance of farmers the Board of Agriculture has issued a leaflet (Special Leaflet No. 64) on ground-nut cake, a feeding-stuff to which much attention has been given since the outbreak of war. As an important product of British tropical possessions the ground-nut (*Arachis hypogaea*) has an obvious interest, and in view of the high value of its oil for edible purposes and the richness in protein (45 to 50 per cent.) of the press residue, or cake, all efforts to secure its wider use in this country are warmly to be commended. As in the case of palm kernels, the successful development of the industry is largely dependent upon the creation and maintenance of a large and stable home market for the cake, and the Board's leaflet should contribute usefully towards this end.

The general concern about rising food prices lends a wider interest than it would normally claim to the recently issued Report on Prices and Supplies of Corn, Live Stock, and other Agricultural Produce in England and Wales in 1915 (Agricultural Statistics, 1915, vol. l., part iii.), presented to the Board of Agriculture and

Fisheries by Sir R. H. Rew in October last. Basing his comparison upon the average for the three years 1906–8, he arrives at the general index number of 138 for the year 1915, as compared with 111 in 1914. As compared with the latter year, the greatest increases were in wool (190 as against 133), barley (166 as against 113), and hops (140 as against 92). As compared with the average prices of 1906–8, the highest levels were attained by wool (190), barley (166), and oats (163). A notable exception to the general high rate of increase was fruit, which was only 5 per cent. above the standard selected.

THE cereal harvests of Argentina and Australia are now sufficiently advanced to enable the International Institute of Agriculture to issue from Rome its annual survey of the world's supply of cereals available until next year's harvest. From this survey the crops of enemy countries are necessarily excluded, but otherwise all significant grain-producing countries are included. In the case of wheat, the estimate shows a decline of no less than 25·3 per cent. from last year's figure, or 8·8 per cent. below the average for the period 1909–13. An important factor in this decline is the lamentable decrease in the Argentine crop, which is estimated at little more than one-half (52 per cent.) of the average for the above period. In marked contrast the Australian crop is estimated to be 4 per cent. higher than last year, and 64 per cent. above the five-year average. For sixteen countries in the northern hemisphere the crop harvested is 9·1 per cent. below the five-year average. Barley, oats, and rye show increases above the five-year average of 1·1, 2·3, and 12 per cent. respectively. For maize, data for the northern hemisphere only are yet available, and show a diminution of 5·3 per cent. below the five-year average. In every case the contrast with the excellent crops of 1915 is very marked.

AT a recent meeting of the National Academy of Sciences, Washington, U.S.A., Prof. W. M. Davis brought forward a proposal for the exploration of the North Pacific Ocean. Some details of the scheme are given in *La Nature* for December 16. Prof. Davis's proposal entails a thorough exploration of vast areas of the ocean in which there are at present few, if any, soundings, not by a single ship, even on the scale of the *Challenger* Expedition, but by methodical, long-continued efforts, presumably by several vessels, and including work in oceanography, biology, geology, and meteorology, as well as in the anthropology of many little-known islands. He suggests that the United States should undertake the work and be responsible for its cost.

A MEMORIAL to Sir Francis Drake was erected last summer on the shores of Drake's Bay, on the coast of California. According to the *Geographical Review* for November, 1916 (vol. ii., No. 5), the memorial takes the form of a redwood post bearing a brass plate inscribed with the date of Drake's landing, June 17, 1579, and is, so far as practicable, a replica of the post set up by Drake himself before leaving the bay. The memorial was erected by the Sir Francis Drake Association, a body of persons interested in commemorating Drake's voyage as a milestone in the history of California. There seems to be little doubt that it was in the bay now named after him, and not in San Francisco Bay, that Drake landed in 1579 on his voyage from Panama.

AN article on the climate of Salonica which appears in the *Bolletino* of the Royal Italian Geographical Society for December (vol. v., No. 12) is of particular importance at present. The article is based on the data obtained from the two observatories founded in 1891 and 1893 respectively, and published in Vienna and Sofia. From the numerous tables which are given it would appear that in January, the coldest month, the mean temperature is 5·4° C., with an absolute minimum of −7·2° C.; July, the warmest month, has a mean of 26·6° C. The mean annual rainfall is 546 mm., with a marked maximum in late autumn and again in May. July, with a mean of 25 mm., appears to be the driest month. Snow falls on an average of six days in winter. The prevailing winds are south-westerly in summer and northerly in winter.

THE *Scientific American* for December 2, 1916, contains an illustrated article on the telescopic rifle-sight of the United States Army. The telescope is of the reflecting prism type, and magnifies six diameters. It is made as nearly as possible dust- and water-proof, and is furnished with a rubber eyepiece to protect the eye of the marksman from the recoil of the rifle. A dovetailed slot on the telescope slides on to a corresponding piece on the service rifle. When detached it is carried in a leather pouch. In sighting, the object is brought on to the point of intersection of the cross lines of the telescope, which is adjusted for ranges up to 3000 yards by means of a milled and graduated screw-head on the left-hand side, and for direction by a smaller screw-head. As in the case of the majority of soldiers the accuracy of sighting with the ordinary sight exceeds the ability to hold the rifle steady enough to secure a hit, it is not intended to issue a telescope sight to every soldier, but only to those who have shown by their skill as marksmen that they have the requisite steadiness of aim to profit by it.

BULLETIN No. 147 of the Institution of Mining and Metallurgy contains an account of a discussion on standardisation and the metric system at a recent meeting of the institution. The desirability of employing discretion in the adoption of the principle of standardisation was insisted upon, and it was pointed out that the articles in which standardisation had been successfully achieved by the Engineering Standards Committee are, in general, parts common to all kinds of machinery, such as nuts, bolt-heads, and wires, and not of a complicated character. In the case of plant that cannot be standardised down to details it may be possible to lay down the broad outlines, such as leading dimensions, speeds, and powers. As examples of mining plant which can be standardised completely were instanced the Californian stamp, amalgamating plates, rock crushers, iron or steel trams for underground use, tramway gauges, skips and skip-ways. An important question is whether standardisation should be adopted in terms of our present system of weights and measures, or in terms of the metric system. As regards universality, the metric system has a particular claim to consideration, as it is a system which is continually obtaining official recognition in other countries, while our own system is not. In the immediate future competition in trade will be more strenuous than it has ever been before, and in adhering to our present weights and measures we shall be seriously handicapped; it is therefore necessary to decide at once whether the question of internal convenience shall continue to override all other considerations. There is no doubt that the adoption of the metric system in this country is inevitable sooner or later, and the present time appears to be exceptionally suitable for introducing the reform.

MR. H. C. BRILL is the author of two papers of considerable biochemical interest in the March number of the *Philippine Journal of Science (Section A.)*. The first deals with the so-called "false" chaulmoogra oil, which is expressed from the seeds of *Hydnocarpus venenata*, Gaertner. Considerable uncertainty exists as to the origin of true chaulmoogra oil, but it is probably obtained from the seeds of *Taraktogenos kurzii*, King. Since the latter oil is admittedly the most promising remedy for the treatment of leprosy, it is highly important to determine whether oils from the seeds of other plants of the same family, such as *H. venenata*, can be substituted for it, thus largely increasing the quantity of the remedy available. The author finds that the oils from *T. kurzii, H. wightiana, H. anthelminticus*, and *H. venenata* are chemically similar, but differ from the oil of *Gynocardia odorata*. It is therefore to be expected that the physiological action of the former oils would be similar, and the outcome of the author's further work on their physiological properties will be awaited with interest. The second paper establishes the fact that certain edible beans, particularly varieties of the soy bean, contain a substance which, like the "maltol" discovered by Brand in caramel malt, gives a reaction with ferric chloride similar to that given by salicylic acid. Of thirty-two varieties of Japanese, Chinese, and American beans, eight breakfast foods, six coffee substitutes, and four flours, twenty-one of the bean samples, one breakfast food, and four of the coffee substitutes gave positive results when tested by the ferric chloride reaction; but only the four coffee substitutes gave positive results when tested by Jorissen's reaction. In testing for the presence of salicylic acid in beans, it is therefore advisable to use Jorissen's reagent.

Mr. J. H. Lavender gives some interesting notes in *Engineering* for December 29 on the hardening of screw gauges. From a number of preliminary experiments on different brands of cast steel, one having a high percentage of manganese was selected. The reasons for this selection are as follows:—(*a*) The manganese content of the steel appeared to affect the volume changes in the steel; (*b*) this particular brand of steel could be quenched in oil, and a better surface finish obtained than from one quenched in water. The analysis of the steel gave the following percentages:—C, 0·96; Si, 0·19; Mn, 1·20; S, 0·03; P, 0·02. The furnace used for heating the gauges need not be of any particular kind, so long as the metal is not heated too rapidly and uniformity during heating is obtained. A small Richmond gas furnace is very suitable for the work. From the results given by the pyrometric curves, it was decided to harden gauges from a temperature of 749° C. Gauges quenched from this temperature are quite hard, and the temperature is sufficiently high to provide a fair margin for the hardener. Undue oxidation is prevented by providing a reducing atmosphere in the furnace by means of excess of gas, and by having the quenching tank as near as possible to the furnace. Gauges are tempered in oil at 260° C., sufficient time being given for obtaining uniform temperature throughout the metal. Whale oil is used for cooling purposes. The strain produced by sudden quenching is got rid of during the tempering process, and a trustworthy man, by following the procedure outlined, can produce work which comes within the National Physical Laboratory's requirements.

"The Wellcome Photographic Exposure Record and Diary" for the new year is issued by Messrs. Burroughs Wellcome and Co., a little volume for the pocket that many photographers would be very sorry to be without. It includes, as in past years, not only what the title indicates, but many tables, formulæ, and other information that photographers need, and the well-known "Exposure Calculator" that has stood the test of many years. The formulæ are, of course, in terms of "tabloids," but as the content of each is given, the user of them knows what he is doing. The price of the diary is one shilling, and special editions are issued for the southern hemisphere and U.S.A.

An early publication of the Cambridge University Press will be Dr. J. Y. Buchanan's "Comptes Rendus of Observation and Reasoning." It will contain, among others, the following papers:—Recent Antarctic exploration; chemical and physical notes; on ice and brines; on steam and brines; the size of the ice-grain in glaciers; ice and its natural history; Beobachtungen über die Einwirkung der Strahlung auf das Gletchereis; in and around the Morteratsch Glacier; a study in the natural history of ice; the use of the globe in the study of crystallography; on a solar calorimeter used in Egypt at the total solar eclipse in 1882; solar radiation; the total eclipse of August 30, 1905; eclipse predictions; the solar eclipse of April 17, 1912; the publication of scientific papers; the Royal Society; nomenclature and notation in calorimetry; thermometric scales for meteorological use; and the metrical system.

Messrs. Sotheran's new catalogue (No. 767) of second-hand books in zoology, including big-game hunting, and comprising many works relating to ornithology, should be seen by all in search of bargains in these branches of science, most of the works being priced at a great reduction. We note that the list directs attention to a complete set to 1912 of the Abstracts of the papers printed in the Philosophical Transactions and the Proceedings of the Royal Society; also of the Philosophical Transactions from 1665 to 1910. Messrs. Sotheran announce the continuation, by Mr. W. L. Sclater, of Shelley's "The Birds of Africa." It is hoped to complete the work by the publication of four or five additional volumes.

We have received from Mr. Humphrey Milford a copy of the general catalogue of the Oxford University Press, issued in November last. It contains 574 pages describing the six sections—one of which is concerned with natural science and medicine—into which the catalogue is divided. An exhaustive alphabetical index of authors, editors, and some titles makes it easy to discover particulars of individual books. The section dealing with natural science runs to thirty-five pages, and describes works on the history and methods of the sciences and on the following, among other subjects:—Mathematics, physics and chemistry, astronomy, geology, biology, and medicine. The illustrations scattered throughout the different sections add to the attractiveness of the catalogue.

The spring announcements of Messrs. Macmillan and Co., Ltd., include:—"A Text-Book of Thermo-Chemistry and Thermo-Dynamics," Prof. O. Sackur, translated and revised by Dr. G. E. Gibson; "Human Physiology," Prof. L. Luciani, translated by Frances A. Welby, with a preface by Prof. J. N. Langley, illustrated, in five vols., vol. iv., edited by Dr. G. M. Holmes; "Community: A Sociological Study, being an attempt to set out the Nature and Fundamental Laws of Social Life," Dr. R. M. Maciver; "The Origin and Development of the Moral Ideas," Dr. E. Westermarck, vol. ii., second edition; "The Economic Annals of the Nineteenth Century," the late Prof. W. Smart, vol. ii., 1821–1830; "Higher Education and the War," Prof. J. Burnet; "Highways and Byways in Wiltshire," E. Hutton, illustrated by Nelly Erichsen.